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10/023,032	12/12/2001	Sadeg M. Faris	Reveo-0050USAACN04	5784

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N .

10/023,032

Applicant(s)

FARIS ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on preliminary amendment filed on 12/12/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 61-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 61-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Examiner's amendment**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Ralph J. Crispino on 06/09/03.

Claims 1-60 have been canceled.

Claims 122-143 has been renumbered as 61-82 respectively.

### ***Status of the Claims***

2. Currently, claims 61-82 are pending.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**5. Claims 61-63, 65, 66, 69 and 70 are rejected under 35 U.S.C. 102(e) as being anticipated by Broer et al., (Broer), USPAT 5,506,704.**

6. Broer discloses (col. 3, lines 6-10, col. 4, lines 20-31, col. 8, line 63- col. 9, line 1-12)a broad-band polarizer comprising:

- a film in cholesteric order of only one liquid crystal material and sites of non-linearly varying pitch across the thickness of the film and at least one chiral material.

Accordingly, claim 61 is anticipated.

As to claim 62, Broer discloses that the liquid crystal material is a polymer (col. 12, line 52).

As to claim 63, Broer also discloses that the liquid crystal material is a monomer (col. 4, lines 23-24).

As to claims 65 and 66, Broer also discloses that the liquid crystal material is nematogenic (nematic and thus not include cross-linkable liquid crystal molecules) (col. 4, lines 23-24).

As to claim 69, Broer further discloses the chiral material is polymerizable (col. 9, line 30-32).

As to claim 70, Broer also discloses that the pitch of the molecular helix is governed by the ratio between the chiral and the mesogenic monomer (meaning the chiral material does not have a mesogenic group).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 64, 67, 68 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broer as applied to claims 61-63, 65, 66, 69 and 70 above.**

10. As to claim 64, using a liquid crystal material that is an oligomer is an obvious variations of a liquid crystal material that is a polymer or monomer. Further, using a liquid crystal material that is an oligomer is common and known in the art for several reasons such as to improve response speed and thus at least would have been obvious.

As to claim 67, using a liquid crystal material that has at least one permanently attached chiral group is common and known in the art and thus would have been obvious to obtain a liquid crystal material that is more stable.

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As to claim 68, using chiral material that is non-cross-linkable is common and known in the art for several reasons such as long-term stability and thus would have been obvious.

As to claim 71, Broer does not explicitly disclose that the chiral material have a mesogenic group. However, chiral material having mesogenic groups or not is an obvious variation of forming chiral material. Further, chiral materials with mesogenic group would provide better response speed and thus would have been obvious.

### ***Double Patenting***

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 72-82 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims (25, 49, 54), 26, 27, 28 and 30 of U.S. Patent No. 6,034,753. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 72 of the instant application is broader in scope than the patented claim.

As to claim 76, using a non-cross-linkable liquid crystal is common and known in the art and thus would have been obvious to avail a proven material.

As to claim 78, using a liquid crystal material that has at least one permanently attached chiral group is common and known in the art and thus would have been obvious to obtain a liquid crystal material that is more stable.

As to claim 79, using chiral material that is non-cross-linkable is common and known in the art for several reasons such as long term stability and thus would have been obvious.

As to claim 80, using a chiral material that is polymerizable is common and known in the art since polymerizable chiral is the most suitable for the preparation of cholesteric liquid crystalline polymers in a more stable manner and thus would have been obvious to obtain cholesteric liquid crystalline polymers in a more stable manner.

As to claims 81 and 82, chiral material having mesogenic groups or not is an obvious variation of forming chiral material and thus would have been obvious.

### ***Conclusion***

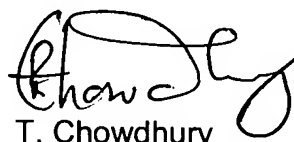
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 6,532,049 and USPAT 5,691,789, assigned to the same assignee as the instant application discloses broad-band polarizer comprising a film of at least one material having a cholesteric order which includes sites of non-linearly varying helix pitch distributed across the thickness of the film.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury  
Primary Examiner  
Technology Center 2800

TRC  
June 14, 2003